WEST Search History

DATE: Tuesday, May 27, 2003

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT; PLUR=YES; OP=AND			
L1	shiga$.clm. or slt$.clm. or rslt$.clm. or o157$.clm. or 0157$.clm.	127	L1
L2	o-specific.clm. or ospecific.clm. or ospolysaccharide.clm. or o-specific-polysaccharide.clm.	3	L2
L3	L2 and (coli or shiga$ or slt or stx$)	3	L3
L4	los same ($toxin or toxin$)	106	L4
L5	los! same (shiga$ or slt$ or stx$ or shigalike)	9	L5
L6	(ospeicfic or o-specific) same (shiga$ or slt$ or stx$ or shigalike)	3	L6
L7	bsubunit.clm. or betasubunit.clm. or b-subunit.clm. or beta-subunit.clm. or (beta near5 subunit).clm.	261	L7
L8	l7 same (conjugat$ or coupl$ or join$ or attach$ or covalent$ or link$) .clm.	47	L8

END OF SEARCH HISTORY

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L1: Entry 14 of 127 File: USPT Jun 25, 2002

US-PAT-NO: 6410024
DOCUMENT-IDENTIFIER: US 6410024 B1

TITLE: Epitopes of shigella like toxin and their use as vaccine and in diagnosis

DATE-ISSUED: June 25, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Burnie; James Peter	Alderley Edge			GB
Matthews; Ruth Christine	Alderley Edge			GB

US-CL-CURRENT: 424/190.1; 424/236.1, 530/328

CLAIMS:

What is claimed is:

1. An isolated peptide of a Shigella-like toxin, wherein said peptide carries the epitope consisting of SEQ ID NO: 5, wherein said peptide is selected from the group consisting of SEQ ID NOs 5, 13 and 14.

2. An isolated peptide according to claim 1, the Shigella-like toxin being that from an E. coli.

3. The isolated peptide according to claim 2, the Shigella-like toxin being that from an E. coli O157 selected from the group of O157:H7, O157:H- and O26:H11.

4. The isolated peptide according to claim 1, the Shigella-like toxin being selected from the group of that of Shigella sonnei, Shigella Boydii, Shigella flexneri, and Shigella dysenteriae.

5. A composition comprising an isolated peptide according to claim 1 and a pharmaceutically acceptable carrier, diluent or excipient.

6. A composition according to claim 5 comprising a pharmaceutically effective amount of said isolated peptide.

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L1: Entry 15 of 127 File: USPT May 21, 2002

DOCUMENT-IDENTIFIER: US 6392121 B1
TITLE: Gemini virus vectors for gene expression in plants

CLAIMS:

5. The pair of recombinant nucleic acid molecules of claim 3, wherein said gene of interest of said first DNA molecule is selected from the group consisting of a gene encoding luciferase, glucuronosidase (GUS), green fluorescent protein (GFP), shigatoxin B (StxB), staphylococcus enterotoxin B (SEB), E. coli labile toxin B (LT-B), Norwalk virus capsid protein (NVCP), and hepatitis B surface antigen (HBsAg).

18. The recombinant nucleic acid molecule of claim 13, wherein the said heterologous gene is selected from the group consisting of a gene encoding luciferase, glucuronosidase (GUS), green fluorescent protein (GFP), shigatoxin B (StxB), staphylococcus enterotoxin B (SEB), E. coli labile toxin B (LT-B), Norwalk virus capsid protein (NVCP), and hepatitis B surface antigen (HbsAg).

25. The vector of claim 20, wherein said gene of interest is selected from the group consisting of a gene encoding luciferase, glucuronosidase (GUS), green fluorescent protein (GFP), shigatoxin B (StxB), staphylococcus enterotoxin B (SEB), labile toxin B (LT-B), Norwalk virus capsid protein (NVCP), and hepatitis B surface antigen (HbsAg).

39. The transgenic plant cell of claim 34, wherein said gene of interest is selected from the group consisting of a gene encoding luciferase, glucuronosidase (GUS), green fluorescent protein (GFP), shigatoxin B (StxB), staphylococcus enterotoxin B (SEB), labile toxin B (LT-B), Norwalk virus capsid protein (NVCP), and hepatitis B surface antigen (HBsAg).

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L1: Entry 54 of 127 File: USPT Sep 21, 1999

US-PAT-NO: 5955449
DOCUMENT-IDENTIFIER: US 5955449 A

TITLE: Diagnosis and treatment of bacterial dysentery

DATE-ISSUED: September 21, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Armstrong; Glen D.	Edmonton			CA
Ratcliffe; Robert M.	Carlsbad	CA		

US-CL-CURRENT: 514/53; 514/25, 514/54, 514/61, 514/63

CLAIMS:

We claim:

1. A pharmaceutical composition useful in treating enteric infections mediated by SLT which composition comprises as active ingredient a moiety comprising the disaccharide subunit .alpha.Gal(1-4).beta.Gal, which moiety is covalently attached to a solid inorganic support and which moiety is capable of binding SLT when so attached to said support, in admixture with a pharmaceutically acceptable excipient.

2. The pharmaceutical composition of claim 1 wherein said moiety comprises the trisaccharide subunit .alpha.Gal(1-4).beta.Gal(1-4).beta.GlcNAc or the trisaccharide subunit .alpha.Gal(1-4).beta.Gal(1-4).beta.Glc.

3. The pharmaceutical composition of claim 1 wherein said support is an inert silica matrix.

4. The pharmaceutical composition of claim 1 which is capable of being eliminated from the gastrointestinal tract.

5. The pharmaceutical composition of claim 1 wherein said moiety is attached to said support via a linker.

6. The pharmaceutical composition of claim 5 wherein said linker comprises a --(CH.sub.2).sub.8 C(O)-- linking arm.

7. A pharmaceutical composition suitable for oral administration to a subject and which composition is useful in treating enteric infections medicated by SLT which composition comprises as active ingredient a composition comprising a

pharmaceutically acceptable orally deliverable solid inert affinity support capable of being eliminated from the gastrointestinal tract which support has an affinity ligand covalently attached thereto through a spacer arm, which spacer arm is of corresponding length to --(CH.sub.2).sub.8 C(O)-- and has a functional group at one terminus to react with said affinity ligand and a functional group at the other terminus to react with said support, wherein said ligand is an oligosaccharide comprising the disaccharide subunit .alpha.Gal(1-4).beta.Gal which binds the SLT in admixture with a pharmaceutically acceptable excipient.

8. The pharmaceutical composition of claim 7 wherein said oligosaccharide comprises the trisaccharide subunit .alpha.Gal(1-4).beta.Gal(1-4).beta.GlcNAc or the trisaccharide subunit .alpha.Gal(1-4).beta.Gal(1-4).beta.Glc.

9. The composition of claim 7 wherein said spacer arm corresponds to --(Ch.sub.2).sub.8 C(O)--.

10. A pharmaceutical composition useful in treating enteric infections mediated by SLT which composition comprises the trisaccharide subunit .alpha.Gal(1-4).beta.Gal(1-4).beta.Glc, wherein said subunit is covalently attached to an inert silica matrix via a --(CH.sub.2).sub.8 C(O)-- linking arm, in admixture with a pharmaceutically acceptable excipient.

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L1: Entry 55 of 127 File: USPT Sep 21, 1999

DOCUMENT-IDENTIFIER: US 5955293 A
TITLE: Assays for shiga toxin and shiga-like toxins

CLAIMS:

1. A method for detecting a toxin selected from the group consisting of shiga toxin and shiga-like toxin II in a sample, the method comprising:

a) contacting the sample with a capture reagent bound to a solid phase support under conditions wherein the capture reagent specifically binds the toxin, the capture reagent being selected from the group consisting of: hydatid cyst material, P1 glycoprotein, and globotriosylceramide (Gb3);

b) contacting the solid phase support to which the toxin has bound with a monoclonal antibody which specifically binds both shiga toxin and Shiga-like toxin II;

c) detecting the presence or the absence of the monoclonal antibody bound to the solid phase support, wherein the presence of the monoclonal antibody indicates the presence of the toxin in the sample.

4. A method for detecting a toxin selected from the group consisting of shiga toxin and shiga-like toxin II in a sample, comprising:

a) contacting the sample with a first monoclonal antibody bound to a solid phase support under conditions wherein the toxin specifically binds the first monoclonal antibody;

b) contacting the solid phase support to which the toxin has bound with a second monoclonal antibody which specifically binds both shiga toxin and shiga-like toxin II;

c) detecting the presence or the absence of the second monoclonal antibody bound to the solid phase support, wherein the presence of the second monoclonal antibody indicates the presence of the toxin.

5. The method of claim 4, wherein the second monoclonal antibody binds the B subunit of both shiga toxin and shiga-like toxin II.

6. A kit for detecting a toxin selected from the group consisting of shiga toxin and shiga-like toxin II, the kit being compartmentalized to receive in close confinement therein one or more containers, said kit comprising:

a) a first container means containing a capture reagent which binds to shiga toxin or shiga-like toxin II, the

capture reagent being selected from the group consisting of hydatid cyst material, P1 glycoprotein, and globotriosylceramide (Gb3); and

b) a second container means containing a monoclonal antibody which specifically binds both shiga toxin and shiga-like toxin II.

13. A monoclonal antibody which specifically binds both shiga toxin and shiga-like toxin II.

19. A method for detecting a toxin selected from the group consisting of shiga toxin and shiga-like toxin II in a sample, the method comprising:

a) contacting the sample with a capture reagent bound to a solid phase support under conditions wherein the capture reagent specifically binds the toxin;

b) contacting the solid phase support to which the toxin has bound with a monoclonal antibody which specifically binds both shiga toxin and Shiga-like toxin II;

c) detecting the presence or the absence of the monoclonal antibody bound to the solid phase support, wherein the presence of the monoclonal antibody indicates the presence of the toxin in the sample.

20. A kit for detecting a toxin selected from the group consisting of shiga toxin and shiga-like toxin II, the kit being compartmentalized to receive in close confinement therein one or more containers, said kit comprising:

a) a first container means containing a capture reagent which binds to shiga toxin or shiga-like toxin II; and

b) a second container means containing a second monoclonal antibody which specifically binds both shiga toxin and shiga-like toxin II.

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L1: Entry 57 of 127 File: USPT Jul 13, 1999

US-PAT-NO: 5922848
DOCUMENT-IDENTIFIER: US 5922848 A

TITLE: Method of recovering shiga-like toxins and vaccines comprising inactivated shiga-like toxin

DATE-ISSUED: July 13, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Vanmaele; Rosa	Edmonton			CA
Armstrong; Glen D.	Edmonton			CA

US-CL-CURRENT: 530/413; 424/234.1, 424/235.1, 424/236.1, 424/241.1, 435/7.37, 435/7.8, 536/124, 536/53

CLAIMS:

What is claimed is:

1. A method for making an immunoprotective vaccine against SLT mediated disease conditions comprising:

(a) purifying SLT from a sample containing said SLT which purifting method comprises:

i) contacting said sample with an affinity support having an affinity ligand comprising the disaccharide subunit .alpha.Gal(1.fwdarw.4).beta.Gal covalently linked to the affinity support through a compatible linker arm to form a SLT-affinity support complex;

ii) separating the SLT-affinity support complex from the sample;

iii) recovering free SLT from the complex under basic non-denaturing conditions, wherein the purified SLT is essentially free of glycolipids;

(b) inactivating the purified SLT;

(c) combining an immunoprotective effective amount of purified inactivated SLT with a pharmaceutically acceptable carrier.

2. The method of claim 1 wherein said purified inactivated SLT is purified inactivated SLT I.

3. The method of claim 2 wherein said purified inactivated SLT is purified

inactivated SLT II.

4. A method of making an immunoprotective vaccine against SLT mediated disease conditions which method comprises combining an immunoprotective effective amount of purified inactivated SLT essentially free of glycolipids as prepared in claim 1 and a pharmaceutically acceptable carrier.

5. The method of claim 4 wherein said purified inactivated SLT is purified inactivated SLT I.

6. The method of claim 5 wherein said purified inactivated SLT is purified inactivated SLT II.

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L1: Entry 65 of 127 File: USPT Dec 15, 1998

DOCUMENT-IDENTIFIER: US 5849714 A
TITLE: Treatment of bacterial dysentery

CLAIMS:

1. A method for inhibiting the development of hemolytic uremic syndrome in a patient arising from enterohemorrhagic E. coli infection mediated by shiga-like toxins which method comprises administering to said patient within about 3 days of presentation of the infection an effective amount of a pharmaceutical composition comprising a pharmaceutically inert affinity support comprising an .alpha.Gal(1.fwdarw.4).beta.Gal subunit which is bound to said support through a non-peptidyl linker arm, wherein said subunit binds SLT toxin.

6. A method for inhibiting the development of hemolytic uremic syndrome in a patient presenting with an enterohemorrhagic E. coli infection mediated by shiga-like toxin, which method comprises administering to the patient within about 3 days of presentation of the infection an effective amount of a pharmaceutical composition comprising a pharmaceutically inert affinity support comprising an oligosaccharide selected from the group consisting of .alpha.Gal(1.fwdarw.4).beta.Gal, .alpha.Gal(1.fwdarw.4).beta.Gal(1.fwdarw.4).beta.GlcNAc which oligosaccharide is bound to the support through a non-peptidyl linker arm.

specific to Shiga-like toxin, type II, is 11E10 produced by ATCC CRL 1907.

18. The method in accordance with claim 15 wherein the antibody specific to Shiga-like toxin, type I, is 13C4, produced by ATCC CRL 1794 and the antibody specific to shiga-like toxin, type II, is 11E11 produced by ATCC CRL 1908.

19. The method in accordance with claim 15 wherein the chemiluminescent 2,3-dihydro-1,4-phthalizinedione is selected from luminol or isoluminol, and the sensitivity enhancer is selected from 4-iodophenol, 4-phenylphenol or 2-chloro-4phenylphenol.

20. The method in accordance with claim 15 having as an additional component a labelling reagent comprising of a horseradish peroxidase labelled antibody directed against the antibodies of the SLT antibody reagent in an aqueous solution.

21. The method in accordance with claim 15 wherein the detection reagent is further comprised of hydrogen peroxide.

22. A diagnostic kit for the detection of Shiga-like toxins comprising

An SLT antibody reagent comprising an antibody specific to Shiga-like toxin, type I, and an antibody specific to Shiga-like toxin, type II, in aqueous solution; and a detection reagent.

23. The diagnostic kit of claim 22 wherein the antibody specific to Shiga-like toxin, type I is 13C4, produced by ATCC CRL 1794.

24. The diagnostic kit of claim 22 wherein the antibody specific to Shiga-like toxin, type II, is 11E10, produced by ATCC CRL 1907.

25. The diagnostic kit of claim 23 wherein the antibody specific to Shiga-like toxin, type II, is 11F11, produced by ATCC CRL 1908.

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L1: Entry 97 of 127 File: USPT Feb 20, 1996

US-PAT-NO: 5492893
DOCUMENT-IDENTIFIER: US 5492893 A

TITLE: Hormone-toxin conjugate compounds

DATE-ISSUED: February 20, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nett; Torrance M.	Ft. Collins	CO		
Glode; Leonard M.	Aurora	CO		

US-CL-CURRENT: 514/15; 514/12, 530/313, 530/324, 530/328, 530/345, 530/398

CLAIMS:

Thus having disclosed this invention, what is claimed is:

1. A compound used for rendering gonadotrophs incapable of secreting gonadotropins, said compound having the general formula ##STR3## wherein T is a toxin group capable of precluding secretion of gonadotropin by said gonadotrophs; X is an amino acid selected from the group consisting of lysine, D-lysine, ornithine, D-ornithine, glutamic acid, D-glutamic acid, aspartic acid, D-aspartic acid, cysteine, D-cysteine, tyrosine and D-tyrosine; Y is a linking agent; and Z is a substituent selected from the group consisting of Gly-NH.sub.2, ethylamide, and AzA-Gly-NH.sub.2, said compound capable of being conveyed across a cell membrane of said gonadotrophs.

2. A compound of claim 1, wherein said toxin group is a modified toxin comprising a toxic domain and a translocation domain but lacks a functional toxin cell binding domain.

3. A compound of claim 1, wherein Y is selected from the group consisting of 2-iminothiolane, N-succinimidyl-3-(2-pyridyldithio) propionate (SPDP),4-succinimidyloxycarbonyl-.alpha.-(2-pyridyldithio)-toluene (SMPT), m-maleimidobenzoyl-N-hydroxysuccinimide ester (MBS), N-succinimidyl(4-iodoacetyl)aminobenzoate (SIAB), succinimidyl 4-(p-maleimidophenyl) butyrate (SMPB), 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide (EDC),bis-diazobenzidine and glutaraldehyde; and T is a toxin group selected from the group consisting of ricin, modeccin, abrin, diphtheria toxin, Pseudomonas exotoxin, shiga toxin, pokeweed antiviral protein, .alpha.-amanitin, gelonin ribosome inhibiting protein ("RIP"), barley RIP, wheat RIP, corn RIP, rye RIP, flax RIP, melphalan, methotrexate, nitrogen mustard, doxorubicin, daunomycin, and modified forms

thereof having at least a toxic domain, wherein said compound is capable of crossing the cell membrane of said gonadotrophs to substantially preclude secretion of hormones by said gonadotrophs.

4. A compound of claim 1, wherein X comprises D-lysine, wherein Y comprises SMPB, wherein Z comprises ethylamide, and wherein T is a toxin group selected from the group consisting of modified diphtheria toxins and modified Pseudomonas exotoxins having a toxic domain and a translocation domain but lacks a functional toxin cell binding domain.

5. A compound of claim 1, wherein X comprises D-lysine, wherein Y comprises EDC, wherein Z comprises ethylamide, and wherein T comprises pokeweed antiviral protein.

6. A compound of claim 1, wherein X comprises D-lysine, wherein Y comprises 2-iminothiolane, wherein Z comprises ethylamide, and wherein T comprises barley ribosome inhibitory protein.

7. A conjugate of claim 1, wherein said linking agent is selected from the group consisting of 2-iminothiolane, N-succinimidyl-3-(2-pyridyldithio) propionate (SPDP), 4-succinimidyloxycarbonyl-.alpha.-(2-pyridyldithio)-toluene (SMPT), m-maleimidobenzoyl-N-hydroxysuccinimide ester (MBS), N-succinimidyl(4-iodoacetyl)aminobenzoate (SIAB), succinimidyl 4-(p-maleimidophenyl)butyrate (SMPB), 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide (EDC), bis-diazobenzidine and glutaraldehyde.

8. A hormone/toxin conjugate comprising a peptide hormone capable of binding to a GnRH receptor, conjugated to a toxin group, by a linking agent, said conjugate being capable of selectively binding to a gonadotroph and of substantially precluding said gonadotroph from secreting gonadotropins, said conjugate capable of being conveyed across a cell membrane of said gonadotrophs and said conjugate being capable, when administered in an effective amount to an animal, of sterilizing said animal without killing said animal.

9. A conjugate of claim 8, wherein said peptide hormone is GnRH or an analog thereof.

10. A conjugate of claim 8, wherein said toxin group is selected from the group consisting of ricin, modeccin, abrin, pokeweed antiviral protein, .alpha.-amanitin, gelonin ribosome inhibiting protein ("RIP"), barley RIP, wheat RIP, corn RIP, rye RIP, flax RIP, diphtheria toxin, Pseudomonas exotoxin, shiga toxin, melphalan, methotrexate, nitrogen mustard, doxorubicin, daunomycin, and modified forms thereof having at least a toxic domain.

11. A conjugate of claim 11, wherein said toxin group is a modified toxin comprising a toxic domain and a translocation domain but lacking a functional toxin cell binding domain.

12. A conjugate of claim 8, wherein an animal administered an effective amount of said conjugate does not show a substantial induction of luteinizing hormone secretion when said animal is challenged with GnRH at least about four weeks after administration of said conjugate.

13. A pharmaceutical composition comprising at least one conjugate of claim 8.

14. A hormone/toxin conjugate comprising:

(a) a toxic domain of a toxin;

(b) a modified B-chain of a toxin that is capable of promoting translocation of said toxic domain across a cell membrane but is modified so as to be devoid of intrinsic binding activity;

(c) a hormone which is capable of selectively binding to a receptor on a

gonadotroph;

(d) a linking agent that conjugates said toxin to said hormone; and

(e) whereby said conjugate, when administered to an animal in an effective amount, is capable of sterilizing said animal without killing said animal.

15. A hormone/toxin conjugate of claim 14, wherein said toxic domain is selected from the group consisting of ricin, modecoin, abrin, diphtheria toxin, Pseudomonas exotoxin, shiga toxin, pokeweed antiviral protein, .alpha.-amanitin, gelonin ribosome inhibiting protein ("RIP"), barley RIP, wheat RIP, corn RIP, rye RIP, flax RIP, melphalan, methotrexate, nitrogen mustard, doxorubicin and daunomycin toxic domains; and wherein said modified B-chain is selected from the group consisting of ricin, modeccin, abrin, diphtheria toxin, Pseudomonas exotoxin, and shiga toxin modified B-chains.

16. A conjugate of claim 14, wherein said hormone is GnRH or an analog thereof.

17. A conjugate of claim 14, wherein said hormone has the general formula

pyroGlu-His-Trp-Ser-Tyr-X-Leu-Arg-Pro-Z,

wherein X is an amino acid selected from the group consisting of lysine, D-lysine, ornithine, D-ornithine, glutamic acid, D-glutamic acid, aspartic acid, D-aspartic acid, cystsine, D-cysteine, tyrosine and D-tyrosine; and Z is a substituent selected from the group consisting of Gly-NH.sub.2, ethylamide, and AzA-Gly-NH.sub.2.

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L1: Entry 96 of 127 File: USPT Apr 30, 1996

DOCUMENT-IDENTIFIER: US 5512282 A
TITLE: Monospecific polyclonal antibodies to shiga-like toxins

CLAIMS:

1. Purified IgG, comprising high titer, monospecific polyclonal antibodies to Shiga-like toxin (SLT) obtained by a process comprising the steps of:

inoculating a bovine animal with a purified, active SLT, derived from E. coli and selected from the group consisting of SLT I, SLT II, SLT IIV and mixtures thereof; and

recovering and purifying IgG from said animal after said animal has had an immune response to said purified active SLT.

2. A method for producing high titer, monospecific, polyclonal antibodies to Shiga-like toxin (SLT) comprising the steps of:

inoculating a bovine animal with a purified, active SLT, derived from E. coli and selected from the group consisting of SLT I, SLT II, SLT IIV and mixtures thereof; and

recovering and purifying IgG from said animal after said animal has had an immune response to said purified active SLT.

4. The method of claim 3 for producing the purified polyclonal antibodies further comprising:

milking said inoculated bovine animal after said animal has had an immune response to said purified SLT to obtain colostrum or milk.

5. The method of claim 2 for producing the purified polyclonal antibodies further comprising the step of:

recovering the purified polyclonal antibodies by affinity chromatography using purified SLT bound to a chromatographic support.

6. A reagent for use in an assay for the detection of an SLT in a sample comprising the purified antibody produced by the method of claim 2 in a liquid.

7. A reagent for use in an assay for the detection of an SLT in a sample comprising the purified antibody

produced by the method of claim 2 attached to a substrate.

11. A method for detecting the presence of an SLT or SLT-producing bacteria in a sample comprising the steps of:

contacting said sample with the purified IgG of claim 1; and

determining if an antibody-antigen reaction has occurred.

13. The method of claim 11 wherein said IgG is attached to a solid support and said step of determining if an antibody-antigen reaction has occurred comprises the steps of:

contacting IgG-SLT complexes formed if said antibody-antigen reaction has occurred with a second antibody to said SLT, wherein said other antibody is labeled with a detectable moiety, thereby forming IgG-SLT-second antibody complexes;

removing unbound second antibody; and

detecting the presence of said detectable moiety.

14. The method of claim 13 wherein said IgG is bound to solid particles and the presence of said SLT is detected by the agglutination of said solid particles.

16. A method for detecting the presence or concentration of an SLT in a sample comprising the steps of using said sample in an immunoassay wherein the purified IgG of claim 1 is used as a reagent in said immunoassay.

17. A method for the passive immunization of a human or animal against SLT toxemia comprising administering to said human or animal a prophylactically effective amount of the purified IgG of claim 1 to prevent said toxemia.

18. A method for the treatment of SLT toxemia in a human or animal comprising administering a therapeutically effective amount of the purified IgG of claim 1 to treat said toxemia to said human or animal.

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L1: Entry 94 of 127 File: USPT Sep 3, 1996

US-PAT-NO: 5552144
DOCUMENT-IDENTIFIER: US 5552144 A

TITLE: Immunogenic shiga-like toxin II variant mutants

DATE-ISSUED: September 3, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Samuel; James E.	Germantown	MD		
Gordon; Valery M.	Kensington	MD		

US-CL-CURRENT: 424/236.1; 424/241.1, 435/200, 530/350, 530/825

CLAIMS:

We claim:

1. An immunogenic mutant Shiga-Like Toxin II variant (SLT-IIv) holotoxin comprising SEQ ID NO:2, which is a mutant A subunit of the SLT-IIv holotoxin, wherein said mutant A subunit differs from the native A subunit of the SLT-IIv holotoxin in having a glutamine at residue 167 and SEQ ID NO:3, which is the B subunit of the SLT-IIv holotoxin; and wherein the enzymatic activity of said mutant SLT-IIv holotoxin is reduced by at least 750-fold and the cytotoxicity is reduced by at least 10,000-fold compared to the native SLT-IIv holotoxin.

2. The immunogenic mutant SLT-IIv holotoxin of claim 1 wherein said immunogenic mutant SLT-IIv holotoxin is essentially purified.

3. An immunogenic polypeptide comprising SEQ ID NO:1 or SEQ ID NO:2, which is a mutant A subunit of Shiga-Like Toxin II variant (SLT-IIv) holotoxin, wherein said mutant A subunit differs from the native A subunit of SLT-IIv holotoxin in having a glutamine at residue 167 and wherein the enzymatic activity of said mutant A subunit is reduced by at least 750-fold and the cytotoxicity of said polypeptide when complexed with the native subunit B of SLT-IIv holotoxin is reduced by at least 10,000-fold compared to the native A subunit when complexed with the native subunit B of the SLT-IIv holotoxin.

4. A vaccine for inducing an immune response in an animal host to bacteria that causes edema disease of swine comprising an immunologically effective amount of the immunogenic mutant Shiga-Like Toxin II variant holotoxin of claim 1 or the immunogenic polypeptide of claim 3 in a pharmaceutically acceptable carrier.

5. A method of inducing an immune response in an animal host to bacteria that

cause edema disease of swine comprising administering an immunologically effective amount of the immunogenic mutant Shiga-Like Toxin II variant holotoxin of claim 1 to said host.

6. The method of claim 5 wherein said animal host is a pig.

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L8: Entry 8 of 47 File: USPT Feb 19, 2002

DOCUMENT-IDENTIFIER: US 6348446 B1
TITLE: Method for selectively purging CD77+ cells from bone marrow or peripheral blood

CLAIMS:

8. A method for the selective ex vivo purging of CD77 positive cells from a population of mammalian hematopoietic cells, comprising the steps of:

harvesting hematopoietic cells from a mammal expressing CD77.sup.+ cells;

contacting the cells in suspension with a resin having at least the B-subunit of shiga toxin attached thereto, so that the CD77.sup.+ cells are bound via the subunit to the resin; and

separating the unbound hematopoietic cells from the resin.

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L8: Entry 10 of 47 File: USPT Sep 11, 2001

DOCUMENT-IDENTIFIER: US 6287563 B1
TITLE: Therapeutic agents and autoimmune diseases

CLAIMS:

1. A method for treating an autoimmune disease which comprises administering to a mammalian subject the B-subunit of E. coli heat labile enterotoxin (EtxB), having ganglioside GM-1 (GM-1) binding activity in an amount effective to treat the disease; wherein in vivo, the agent binds to GM-1; wherein the agent when bound to GM-1 has an effect on an autoimmune disease; and wherein, if the agent is co-administered with an antigenic determinant, then the agent and the antigenic determinant are not so linked as to form a single active agent.

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L1: Entry 70 of 127 File: USPT May 5, 1998

US-PAT-NO: 5747272
DOCUMENT-IDENTIFIER: US 5747272 A
**** See image for Certificate of Correction ****

TITLE: Detection of shiga-like toxins of enterohemoragic Escherichia coli

DATE-ISSUED: May 5, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
O'Brien; Alison	Bethesda	MD		
Lindgren; Susanne Ward	Portland	OR		
Perera; Liyanage Parakrama	Rockville	MD		
Strockbine; Nancy A.	Lithonia	GA		
Melton-Celsa; Angela Ruth	Sterling	VA		

US-CL-CURRENT: 435/7.37; 435/7.32, 435/7.92, 435/7.95, 435/968, 435/975, 530/388.4, 530/389.5

CLAIMS:

We claim:

1. A diagnostic kit for the detection of Shiga-like toxins comprising

an SLT antibody reagent comprising an antibody specific to Shiga-like toxin, type I, and an antibody specific to Shiga-like toxin, type II, in aqueous solution; and

a detection reagent comprising a chemiluminescent 2,3-dihydro-1,4-phthalizinedione and a sensitivity enhancer capable of enhancing the sensitivity of the chemiluminescent 2,3dihydro-1,4-phthalizinedione reaction.

2. The diagnostic kit of claim 1, wherein the chemiluminescent 2,3-dihydro-1,4-phthalizinedione is selected from luminol or isoluminol, and the sensitivity enhancer is selected from 4-iodophenol, 4-phenylphenol or 2-chloro-4-phenylphenol.

3. The diagnostic kit of claim 1, having as an additional component a labelling reagent comprising a horseradish peroxidase labelled antibody directed against the antibodies of the SLT antibody reagent in an aqueous solution.

4. The diagnostic kit of claim 1, wherein the detection reagent is further

comprised of hydrogen peroxide.

5. A diagnostic kit for the detection of Shiga-like toxins comprising

an antibody specific to Shiga-like toxin, type I, in aqueous solution;

an antibody specific to Shiga-like toxin, type II, in aqueous solution; and

a detection reagent comprising a chemiluminescent 2,3-dihydro-1,4-phthalizinedione and a sensitivity enhancer capable of enhancing the sensitivity of the chemiluminescent 2,3-dihydro-1,4-phthalizinedione reaction.

6. The diagnostic kit of claim 5, wherein the chemiluminescent 2,3-dihydro-1,4-phthalizinedione is selected from luminol or isoluminol, and the sensitivity enhancer is selected from 4-iodophenol, 4-phenylphenol or 2-chloro-4-phenylphenol.

7. The diagnostic kit of claim 5, wherein the detection reagent is further comprised of hydrogen peroxide.

8. The diagnostic kit of claim 5, having as an additional component a labelling reagent comprised of a horseradish peroxidase labelled antibody directed against the antibody specific to Shiga-like toxin, type I, and the antibody specific to Shiga-like toxin, type II.

9. The diagnostic kit of claim 1 wherein the antibody specific to Shiga-like toxin, type I, is 13C4, produced by ATCC CRL 1794 and the antibody specific to Shiga-like toxin, Type II is 11E10 produced by ATCC CRL 1907.

10. The diagnostic kit of claim 1 wherein the antibody specific to Shiga-like toxin, type I is 13C4, produced by ATCC CRL 1794 and the antibody specific to shiga-like toxin, type II is 11F11 produced by ATCC CRL 1908.

11. The diagnostic kit of claim 5, wherein the antibody specific to Shiga-like toxin, type I is 13C4, produced by ATCC CRL 1794.

12. The diagnostic kit of claim 5, wherein the antibody specific to Shiga-like toxin, type II, is selected from 11F10, produced by ATCC CRL 1907 and 11F11, produced by ATCC CRL 1908.

13. The diagnostic kit of claim 5, wherein the antibody specific to Shiga-like toxin, type I, is 13C4, produced by ATCC CRL 1794 and the antibody specific to Shiga-like toxin, type II, is 11E10 produced by ATCC CRL 1907.

14. A diagnostic kit of claim 5, wherein the antibody specific to Shiga-like toxin, type I, is 13C4, produced by ATCC CRL 1794 and the antibody specific to Shiga-like toxin, type II is 11F11 produced by ATCC CRL 1908.

15. A method of qualitatively or quantitatively determining the presence or amount of substantially all Shiga-like toxins in a test sample which comprises, in the first step, contacting the test sample with a SLT antibody reagent comprising an antibody specific to Shiga-like toxin, type I and an antibody specific to Shiga-like toxin, type II, in aqueous solution; in a second step, contacting the product of the first step with a detection reagent; and in a third step, determining the specific binding of said SLT antibody reagent as a determination of the Shiga-like toxins in the test sample.

16. The method in accordance with claim 15 wherein the detection reagent comprises a chemiluminescent 2,3-dihydro-1,4phthalizinedione and a sensitivity enhancer capable of enhancing the sensitivity of the chemiluminescent 2,3-dihydro-1,4phthalizinedione reaction.

17. The method in accordance with claim 15 wherein the antibody specific to Shiga-like toxin, type I, is 13C4, produced by ATCC CRL 1794 and the antibody

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L1: Entry 103 of 127 File: USPT Oct 11, 1994

DOCUMENT-IDENTIFIER: US 5354661 A
TITLE: Monoclonal antibody to enterohemorrhagic Escherichia coli 0157:H7 and 026:H11 and method for detection

CLAIMS:

1. A diagnostic kit for detecting the presence of E. coli 0157:H7, E. coli 026:H11, or both, comprising a monoclonal antibody which specifically binds to E. coli 0157:H7 and E. coli 026:H11 prepared from hybridoma ATCC HB 10452 in one or more container and directions for its use.

5. A diagnostic kit for differentiating enterohemorrhagic E. coli 0157:H7 and E. coli 026:H11 from other E. coli and enteric pathagens based upon an outer membrane protein unique to enterohemorrhagic E. coli 0157:H7 and E. coli 026:H11 comprising a monoclonal antibody which specifically binds to the same epitope bound by monoclonal antibody 4E8C12 and directions for its use.

7. An immunoassay method for the detection of E. coli 0157:H7 or E. coli 026:H11, which comprises

(a) contacting a sample suspected of containing E. coli 0157:H7 or E. coli 026:H11 with a monoclonal antibody which specifically binds to the same epitope bound by monoclonal antibody 4E8C12 in order to form an immune complex, and

(b) determining the presence of the complex in order to detect E. coli 0157:H7 or E. coli 026:H11 in the sample.

10. A bioreagent for antibody assays comprising a substantially pure protein found in the outer membrane of E. coli 0157:H7 or E. coli 026:H11 having a molecular weight between about 5000 and 6,000 daltons, said protein being specifically bound by a monoclonal antibody which specifically binds to the same epitope specifically bound by monoclonal antibody 4E8C2.

11. A substantially pure outer membrane protein harvestable from E. coli 0157:H7 or E. coli 026:H11, the outer membrane protein having a molecular weight between about 5,000 and 6,000 daltons, and which specifically binds to monoclonal antibodies secreted by hybridoma ATCC HB 10452.

12. A method for detecting the presence of an antigen wherein the antigen is an outer membrane protein of E. coli 0157:H7 on a sample comprising

(a) culturing the sample in a selective enrichment medium containing acriflavin to form an enriched culture, and

(b) detecting the E. coli 0157:H7 outer membrane antigen in the enriched culture.

17. The method of claim 16 wherein the enrichment medium contains quantity of acriflavin-HCl and casamino acids to enhance antigen expression by E. coli 0157:H7.

19. The method of claim 12 wherein the selective enrichment medium further includes the following components in quantities sufficient to form an enriched culture of E. coli 0157:H7: Trypticase soy broth, bile salts, K.sub.2 HPO.sub.4, casamino acids and novobiocin.

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L1: Entry 80 of 127 File: USPT Sep 16, 1997

DOCUMENT-IDENTIFIER: US 5668255 A
**** See image for Certificate of Correction ****
TITLE: Hybrid molecules having translocation region and cell-binding region

CLAIMS:

18. The hybrid molecule of claim 3, wherein said toxin is Shiga toxin.

19. The hybrid molecule of claim 3, wherein said toxin is Shiga-like toxin.

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L1: Entry 93 of 127 File: USPT Sep 3, 1996

DOCUMENT-IDENTIFIER: US 5552294 A
TITLE: Rapid detection of virulence-associated factors

CLAIMS:

3. A method as claimed in claim 1 wherein the at least one virulence-associated factor in the contacting step is selected from the group consisting of Shiga-like toxin I, Shiga-like toxin II, heat-labile enterotoxin, heat stable enterotoxins a+b, heat stable-like enterotoxins, adhesins, lipopolysaccharide-0157 antigen, hemolysin, cholera toxin, flagella, zot toxin, Shiga toxin, toxin A, toxin B, surface antigen for invasion, cytotoxins, proteases, siderophores, invasins, outer membrane protein, pili, and lipopolysaccharide.

4. A method as claimed in claim 1 wherein the bacterial toxin is Shiga-like toxin I or Shiga-like toxin II.

5. A method as claimed in claim 1 wherein the bacterial toxin includes a mixture of Shiga-like toxin I and Shiga-like toxin II.

17. A method for detecting a Shiga-like toxin directly from a stool sample, comprising:

contacting a stool sample suspected of containing bacteria producing at least one Shiga-like toxin with a toxin releasing solution under conditions such that at least one Shiga-like toxin is released; and

immunochemically detecting any of the at least one Shiga-like toxin released directly from bacteria in the stool sample by the toxin releasing solution.

18. A method as claimed in claim 17 wherein the at least one Shiga-like toxin in the contacting step includes a mixture of both Shiga-like toxin I and Shiga-like toxin II.

21. A method for immunochemically detecting Shiga-like toxin I or Shiga-like toxin II in feces, comprising:

contacting a feces sample suspected of containing Shiga-like toxin I or Shiga-like toxin II producing bacteria with a toxin releasing solution under conditions which release Shiga-like toxin I or Shiga-like toxin II from the bacteria; and

immunochemically detecting the presence or quantity of the released Shiga-like toxin I or Shiga-like toxin II,

said toxin releasing solution containing:

a) a surface active agent selected from the group consisting of N,N',N'-polyoxyethylene(10)-N-tallow-1,3-diaminopropane, polyoxyethylenesorbitan monolaurate, and octylphenolethylene oxide condensate;

b) urea;

c) a polymyxin; and

d) phenylmethylsulphonyl fluoride and said solution releasing the Shiga-like toxin I or Shiga-like toxin II without impeding the immunochemical detectability of the Shiga-like toxin I or Shiga-like toxin II.